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Infrastructure

Installation and Deployment

New Functionality

DSCheckLS license client tool for checking license server availability
> This license client-side tool allows you to get DS License Server status, without running processes such as CATIA or DSLicMgt.

Enhanced Functionality

Offline license extraction can be enabled or forbidden
> You can now enable or forbid offline license extraction when configuring the license server. A purple license server status in the Properties tab of the Local License Key Management tool indicates that offline license extraction is forbidden.

Deterministic failover member access
> You can now configure licensing clients to contact failover members in a specific order, if preferred, instead of relying on the random access implemented by the licensing client process.

Supporting Platforms on PLMDB Setup
> PLMDB Setup is supported on Windows (64-bit) platform.

Supporting LCA Application on Windows Server
> The VPC - ENOVIA Client Product is now available in 64 bit media.

Supporting VPM Navigator on Windows Server
> The DER - ENOVIA - VPM Product Design Configuration is now available in 64 bit media.

Supporting DB 2 10
> DB 2 10 is also supported by Vault and Windows Server.

Infrastructure

Enhanced Functionality

Customizing Print Settings
> A new option lets you print document without vertices.

Customizing Settings

PCS
> A new option lets you reverse the macro execution.

Component Catalog Editor

No enhanced functionalities in this release.

Data Exchange Interfaces

Enhanced Functionality

STEP Import

 AP242 STEP XML files are now supported.

 STEP Export - Tessellated Geometry

An option has been added to keep the link between a 3D Annotation and the edges it references.

STEP File Preview

 A batch command lets you convert AP 214/ AP 203 STEP files to AP242 with tessellated geometry STEP files, a lighter format for quick visualization.

Mechanical Design

Part Design

Enhanced Functionality

Creating Splits

You can now split an element by extrapolating the splitting surface in curvature when it is intersecting at least one of the edges of the element.

Creating Remove Face Features

You can now easily detect incorrect inputs with the help of improved error message and diagnostics.

Creating Tritangent Fillets

You can now define several limiting elements while creating a tritangent fillet. You can create and define sweeps or extracted elements, for example, as limiting elements.

Creating Patterns

You can now insert Part Design features such as pads, pockets, shafts, grooves, and holes, on the fly, while creating a pattern.

Creating Sew Surfaces

You can now specify the maximum deviation limit while sewing geometry. You can choose the desired deviation modes for different tolerance values during sewing.

Creating User Patterns

You can now quickly define the required number of axis systems as positions for instances, along with the defined curve, normal to the surface.

Functional Molded Part

Enhanced Functionality

Working with Functional Import Wizard

You can now import the intersection fillets while importing the features.

Interactive Drafting

Enhanced Functionality

Changing Frame Sizes for Fixed Frames

You can have multiple fixed size frames for annotations in the same drawing. You can change the size of the frames and manage several fixed sized frames using standard files.

Updating Welding Symbols with Standard Switch

The welding symbols are now automatically updated when the drawing standard is switched. During the switch, a symbol is not displayed if it is unavailable in the target standard.

Creating a Datum Target

It is now possible to create a movable datum target and specify a square reference area for the datum target, in accordance with ASME Y14.5 2009 standard.

2D Layout for 3D Design

New Functionality

Displaying 3D Grid

You can now display a 3D grid for work on support in the layout view. The 3D grid is created in association with Generative Shape Design.

Displaying Views

- You can use the Display View command to set up the optimal context for reviewing views.
- You can define your own display area, which will be taken into account when displaying views.
- Within a given work session, you can identify already-displayed views using a specific color code in the specification tree.

Enhanced Functionality

Computing 3D Background Size

It is possible to compute the size of the 3D background of a view considering the filters, sectioning, 2D visualization mode and clippings (clipping frame, back clipping, and clip view). Computing the size helps define the layout easily. This ability allows:

- Computing callout size created with the View From Reference command and the Create Callout in Reference View command.
- Reframing on view background when using the Clipping Frame command.
- Computing section boundaries size in the following cases:
  - With the View From Profile command
  - When adding boundaries through Properties
  - During   Resize Boundaries on View Background command.

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Customizing Settings

3D Grid

For principal views , views from references, views from profiles, and axonometric views, you can choose to display 3D grid for work on support.

View Frame

The Take background into account when displaying view frame option lets you decide when the background view frame is reframed.

Creating Views from Reference Elements

When you create a view from another element using the View From Reference command, you can now perform the following operations:

- Align and orient the view according to the folding lines. See   View From Reference.
- Create a display filter when the view is created with a geometric element as a view

support. See   Filter.

When a non-perpendicular view is created from a reference, you can now choose to create a callout for it.

When a callout is created for a view created from a reference, the callout size is computed according to the bounding box of the view to be created. You can modify the callout overrun size. See,   Callout Creation.

Sketcher

New Functionality

Creating Profile Offsets
You can now offset an entire profile and manage the offset between the base profile and the offset profile.

Enhanced Functionality

Analyzing Sketched Geometry
You can check and change the orientation of the profile of the sketch under analysis.
Preview while Chamfering and Cornering
You can now display the preview while   chamfering and   cornering multiple vertices.
Projecting or Intersecting an Axis
You can now project or intersect the axis of a cylindrical face.

Structure Design

New Functionality

Replacing User Defined Features

The new command, Replace UDF, lets you replace the user defined features of endcuts and slots on the shapes.

Wireframe and Surface

Creating Planes

You can now use a ratio parameter to create a plane normal to a curve. This ratio will position the plane at a give point on the curve corresponding to this ratio.

Extracting Geometry

Two new propagation types are provided: Protrusion and Depression.

Aerospace Sheetmetal Design

New Functionality

Creating Twin Joggles

This new functionality lets you create a twin joggle in a single command.

3D Functional Tolerancing & Annotation

Enhanced Functionality

Note Object Attribute From a Ditto

The note object attribute is now updated automatically with the changes in the the 2D component.

Setting Dimension Representations

You can now create dimensions along, perpendicular, and at an angle to the defined direction.

Creating a Weld Feature

The welding symbol is now automatically updated when the drawing standard is switched from one to another.

Specification Tree Browsing History

The background color codes have been set in the specification tree for the following:

- Active view
- Already reviewed or displayed views and captures. See Displaying a Tolerancing Capture.

You can now:
- Display the views. See Displaying a View.
- Capture the display area. See Capturing the Display Area.

Creating Datum Targets

You can now create a movable datum target.

A new square symbol has been added in the area of contact symbol list in the Datum Target Creation dialog box.

Reordering Features in the Specification Tree

You can now alphabetically sort the objects of the similar type in the specification tree.

You can now reorder and sort dimensions, framed dimensions, coordinate dimensions, texts, flag notes, note object attributes, geometrical tolerances, weld features, roughness features, datum reference frames, construction geometries, threads, and restricted areas.

Semantic support of ISO 1101:2012

You can now have semantic support of the ISO 1101:2012 standard. Newly created annotation sets support the ISO 1101:2012 standard. The following enhancements are made:

- Default Annotation is renamed as Apply separately several times. See Applying Annotation to Several Geometrical Elements.
- The leader extremity of the geometrical tolerance is, by default a Filled Circle.
- The Semantic Tolerancing Advisor dialog box:
  - New Propagation of Selection options are added in the Semantic Tolerancing Advisor dialog box. See Propagating Geometry Selection for Feature Creation.
  - The nomenclature of the feature types, proposed in the list is changed.

- The Geometrical Tolerance dialog box:
  - The Display median feature symbol option is added to display the symbol in the tolerance frame.
  - The Non-Uniform option is added for non-uniform features such as, profile of a surface.
  - The Notes tab is added in the dialog box. See Creating Semantic Geometrical Tolerances.

Changing Frame Sizes for Fixed Frames

You can now specify multiple fixed size frames for annotations. If you change the frame size in the standard, the frame size of all the annotations referring to that frame also changes. This ensures a correct graphical representation of the annotations whenever the standard changes.

Creating a Datum and Datum Targets

You can now create a semantic movable datum target.

If specified the length and the width of the Rectangular geometric form in the dialog box are same, the datum target feature appears with the square symbol and size of the square.

Composites Braiding

Enhanced Functionality

Multiple Core Samples

The dialog box has been enhanced, in particular, an edition function has been added. A comparing function enables you to compare the stacking with the preliminary design.

Shape Design & Styling

FreeStyle Shaper Optimizer & Profiler

Enhanced Functionality

Breaking Surfaces
You can now directly select an intersection curve resulting from a cutting plane analysis as the limiting element.

Performing a Curvature Analysis
You can now separately display the minimum and maximum values.

Generative Shape Design & Optimizer

Enhanced Functionality

Scanning a Part and Defining In Work Objects
>   The user interface has been improved.

Creating Remove Face Features
>   The error diagnostic is improved and the face causing the error is now highlighted in red color.

Smoothing Curves
>   You can now select multiple curves to be smoothed.

Creating Mid Surfaces
>   You can now automatically compute the threshold thickness.

Creating a Mating Flange
>   You can now specify a deviation tolerance if the default tolerance is too small.

Deforming Elements According to Shape Morphing
>   You can choose a parameter specifying the industry context of the part currently designed. It helps to determine the geometrical features of a part, especially fillets and chamfers, and smartly modify it.

Creating Fill Surfaces
>   You can now have a better control of the deviation.

Extrapolating Curves
>   You can now extrapolate wires on both extremities.

Extrapolating Surfaces (curvature mode only)
- You can now extrapolate a surface on multiple sides.
- You can now extrapolate a surface up to a geometrical element.
- You can now set a maximum Deviation value between the obtained and the theoretical result surface.

Creating Extruded Surfaces
>   While creating an extrude, by default, a normal direction to the plane, on which the profile lies is selected.

Defining an Axis System
>   You can now specify an existing axis system as reference when creating a new axis system.

Creating Multiple Points and Planes
>   You can now create multiple axis systems along a curve.

Creating 2D-View Sections
>   In the Vertices list, vertices are sorted depending on their type (convex and concave) and in descending order of their radii.

Imagine & Shape

New Functionality

Exporting a Mesh
This new functionality lets you export subdivision surfaces from the Imagine & Shape workbench to another software.
Creating Advanced Primitives
This new functionality lets you create parametric primitives.
Mapping a Picture Onto a Subdivision Surface
This new functionality lets you map a picture on the subdivision surface to add detail while modeling.
Defining Symmetric Zones
This new functionality lets you define zones of the subdivision mesh to be kept as symmetric zones.
Cutting a Subdivision Surface by an Edge
This new functionality lets you cut a subdivision surface by one or more edges to modify the existing mesh or create sub-parts of the mesh.

Enhanced Functionality

Importing a Mesh
A new option lets you apply the color from an mtl file to the imported subdivision surfaces.
Displaying the Textual Help
You can now pin the textual help either to the pointer or to the screen.
Selecting By Type
You can now select two faces or two vertices, press Shift and propagate the selection of elements between them.
Managing the Compass
You can select the center of the compass to activate or deactivate the Robot Definition mode.
Aligning Vertices
When aligning vertices orthogonally, you can directly draw a target curve instead of selecting an existing one. The curve disappears as soon as the alignment is applied.
Performing a Symmetry
When the symmetry plane cuts the faces diagonally, triangles may be created and the result may not be consistent. Click No Faces to generate a better result. A slider appears to manage the weight of the edges located on the symmetry plane.

Digitized Shape Editor

Enhanced Functionality

AMF Export
Textures and material visualization are now supported.

Realistic Shape Optimizer

New Functionality

3D Deformation Law
This new command lets you create a deformation law to be used by Digitized Morphing.

Enhanced Functionality

Digitized Morphing
When the element to deform is a curve, the output is now a feature (no longer a datum).

Equipment & Systems Engineering

Circuit Board Design

Enhanced Functionality

Working With Constraint Area Properties
     You can now choose the type of position you require for a constraint area.

Electrical Harness Installation

Customizing Settings

Support Instance Migration Mode
New options are available to manage the migration of supports.

Machining

NC Manufacturing Infrastructure

There are no new or enhanced functionalities in this release.

Prismatic Machining Preparation Assistant

There are no new or enhanced functionalities in this release.

Prismatic Machining

Enhanced Functionality

Pocketing, 4-Axis Pocketing

The concentric tool path style has been enhanced to reduce the machining time on open pockets or on pockets that include holes of any shape.

3 Axis Surface Machining

Enhanced Functionality

Roughing, Spiral Milling

The concentric tool path style has been enhanced to reduce the machining time on open pockets or on pockets that include holes of any shape.

Multi-Pocket Machining

Enhanced Functionality

Power Machining

The concentric tool path style has been enhanced to reduce the machining time on open pockets or on pockets that include holes of any shape.

Advanced Machining

New Functionality

Stiffener

This new machining operation lets you machine inclined and horizontal stiffeners in one shot.

Enhanced Functionality

Cavities Roughing

The concentric tool path style has been enhanced to reduce the machining time on open pockets or on pockets that include holes of any shape.

Advanced Machining

Lathe Machining

There are no new or enhanced functionalities in this release.

Multi-Slide Lathe Machining

There are no new or enhanced functionalities in this release.

STL Rapid Prototyping

Enhanced Functionality

AMF Export
      Textures and material visualization are now supported.

DPM Process and Resource Definition

Enhanced Functionality

Use the volumetric filter on a subassembly's data only

In previous releases, when you used the volumetric filter, all items that met the volumetric criteria were loaded. Now you can specify a subassembly so that only data from that subassembly that meet the criteria is loaded.

When a DPM session is linked to an ENOVIA server, you can load data from DPE into the same DPM session

Previously, a batch offered a similar functionality. Now a VB script is offered.

Progress bar provided for loading user context

Product Synthesis

DMU Fitting Simulator

There are no new or enhanced functionalities in this release.

DMU Engineering Analysis Review

Enhanced Functionality

Color Map in the Specification Tree
> The color map now appears in the Specification Tree under its corresponding image.

Image Edition
> You can select an image as group, which allows you to filter entities by values.

Human Builder

New Functionality

XML Settings for VOA
This describes the functionalities for XML Settings for VOA.

Enhanced Functionality

Defining the Occupant Posture Prediction Dialog box
The Method section of the Occupant Posture Prediction Definition dialog box has been enhanced to reflect postures according to the J4004 reference.

Human Activity Analysis

There are no new or enhanced functionalities in this release.

Human Activity Analysis